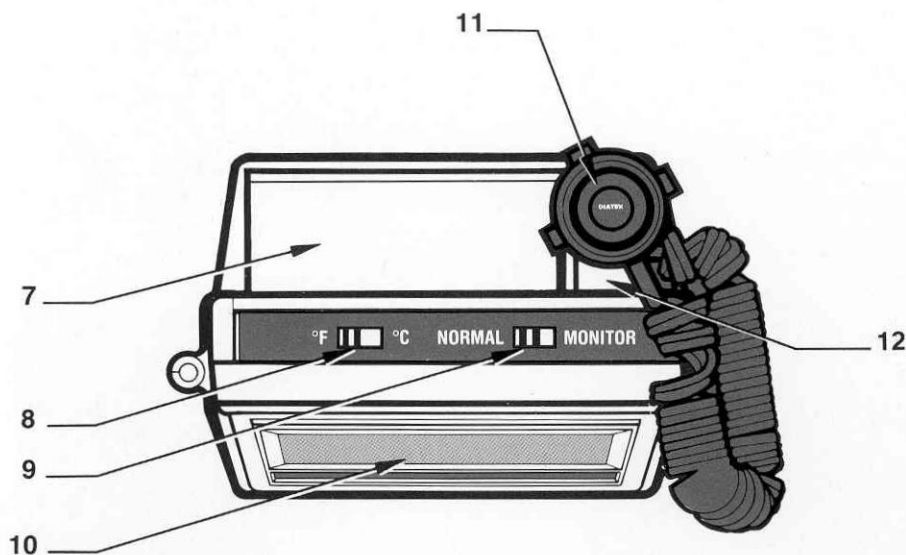
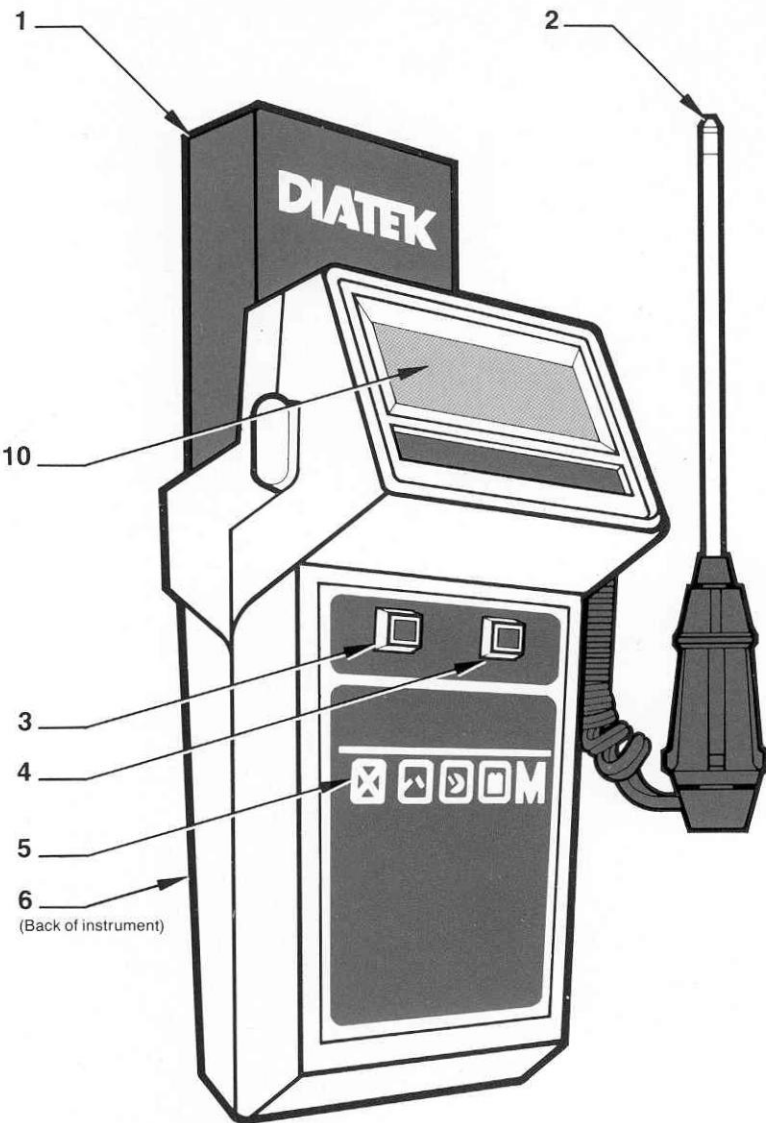


**DIATEK®**

**MODEL 600  
DIGITAL ELECTRONIC  
THERMOMETER SYSTEM  
DIRECTIONS FOR USE**





## FEATURES

- normal and monitor modes for temperature measurement
- 30 second "analog type" pulse and respiration timer with both visual and audible indication
- large high resolution liquid crystal display with backlight for night viewing
- switch selectable Fahrenheit and Celsius temperature scales
- no charger base required: uses disposable batteries
- internal calibration check before each temperature
- self diagnostic with visual error or fault displays
- automatic power on and off
- audible tones for pulse timer, error or fault conditions, and completion of temperature taking cycle

## SPECIFICATIONS

- **RANGE:**  
normal and monitor modes  
28.9°C to 42.2°C  
84.0°F to 108.0°F
- **CALIBRATION ACCURACY:**  
±0.1°C, ±0.2°F
- **BATTERY CAPACITY:**  
up to 1000 hours of continuous use with three type AA cells disposable batteries
- **DIMENSIONS:**  
length 6.25 inches; width 3.7 inches; height 2.4 inches  
weight: 10.5 ounces  
case material: ABS cyclolac "T" grade plastic
- **VISUAL AND AUDIBLE INDICATORS:**  
digital temperature display  
30 second pulse and respiration timer  
instrument malfunction  
broken probe  
probe position  
low battery  
temperature beyond instrument range  
monitor temperature taking mode

## ACCESSORIES

### WALL MOUNTING BRACKET WITH LOCKING MECHANISM:

A wall mounting bracket is available which allows the Model 600 thermometer to be secured to a wall or cabinet. A key locking mechanism may be added to more fully secure the thermometer (requires special order from Diatek).

### CALIBRATION KEY:

The Diatek Model 600 automatically calibrates itself prior to each measurement cycle by comparison against three internal precision reference standards. Accordingly, user calibration is not necessary. However, a calibration key is available in the event hospital regulations require periodic checks.

Installed in place of a probe, the calibration key will cause a temperature display of  $97.3 \pm 0.2^\circ\text{F}$  ( $36.3 \pm 0.1^\circ\text{C}$ ) when the thermometer is activated in the monitor mode.

1. Probe cover box
2. Probe
3. Backlight switch
4. Timer switch
5. Display legends
6. Battery access door (see figure 12)
7. Cover storage well
8. Fahrenheit/Celsius select switch
9. Normal/Monitor mode select switch
10. Display
11. Ejection button
12. Probe receptacle (see figure 7)



## SET-UP PROCEDURE

1. Unpack the Model 600 thermometer and probes, checking for any damage that may have occurred during shipping.
2. Insert the connector plug of the oral probe into the thermometer receptacle and then the probe shaft into the probe storage channel. The thermometer will not operate if the probe is not properly connected.
3. Insert a box of 25 Diatek Model 031 disposable probe covers into the storage well of the thermometer.

## OPERATING INSTRUCTIONS

Preparation for temperature measurement:

1. Place the carrying strap around your neck with the instrument display facing you.
2. Select the desired Fahrenheit or Celsius display by moving the °C/°F slide switch to the appropriate position.
3. In the same manner, select the mode of temperature measurement, normal or monitor.

## NORMAL OPERATING MODE

The normal mode of operation provides a rapid means of oral or rectal temperature taking under most conditions.

Set the normal/monitor slide switch to the normal position (see figure 1). Withdraw the probe from the storage channel and observe the 6 second display test ensuring that no display segments are missing (see figure 2). The unit will then display 84.0°F (28.9°C) with the low temperature arrow ON until the probe temperature rises above 84.0°F.

### ORAL TEMPERATURE MEASUREMENT:

Load a probe cover onto the probe by holding the probe collar with the thumb and forefinger being careful not to hold or press the ejection button (see figure 3).

Insert the probe tip gently into patient's slightly opened mouth. Carefully slide probe under the tongue on either side of the mouth to reach the sublingual pocket (see figures 4 and 5).

The probe should be held during the entire temperature measurement process to insure the probe tip maintains tissue contact (see figure 6).

During the temperature measurement cycle, a continually increasing temperature should be observed on the display. When the final temperature has been reached, a tone will sound and an "F" or "C" will be displayed to the right of the numbers.

After the temperature measurement is complete, eject the probe cover by firmly pressing the ejection button on the probe. Insert into the probe receptacle to clear the display in preparation for another temperature (see figure 7).

### RECTAL TEMPERATURE MEASUREMENT:

Exchange the oral probe (blue label) for the rectal probe (red label) by removing the connector plug from the thermometer and the probe from the storage channel. Complete the exchange by plugging the connector into the thermometer and placing the rectal probe in the storage channel.

Load a probe cover and observe the thermometer start-up display as in the oral procedure.

Separate the buttocks with one hand. Apply lubricant when necessary. Using the other hand, gently insert the probe **only 1 cm (3/8 inch)** inside the rectal sphincter. The insertion depth should be less in infants and small children. Extreme caution should be used to avoid risk of bowel perforation. (See figure 8.)

Tilt the probe to insure good tissue contact and continue to keep the buttocks separated until measurement cycle is complete.

## CONTINUOUS MONITOR MODE OPERATION

Monitor mode operation is normally used for longer term monitoring or when difficult situations prevent accurate temperatures from being taken in the normal mode. The probe must be in contact with tissue for at least 3 minutes for accurate temperature measurement. Monitoring temperatures may not be identical to predict temperatures because of ambient temperature influence and other factors. The trend in temperature is the important standard to be observed during monitoring.

To take a temperature in the monitor mode, set the normal/monitor switch to the monitor position (see figure 9). Insert the continuous monitor probe connector (see figure 10). Connect the desired sensor type to the thermometer causing the 6 second display test to appear. Verify that no display symbols are missing. Attach the probe to the patient as required. Once the temperature readout has been allowed 3 minutes to stabilize, the patient may be continuously monitored as long as necessary.

The symbol "M" on the display indicates that the unit is operating in monitor mode. The Model 600 will turn off after 5 minutes if a temperature above 84.0°F (28.9°C) is not sensed.

## BACKLIGHT OPERATION

The display backlight is used to allow the display to be read in poorly lighted areas. This function should not be used excessively as it will shorten the thermometer battery life.

Pressing the backlight switch any time the thermometer function is active will cause the backlight to illuminate as long as the button is pressed. (Note: The backlight is not visible in a well-lighted area.) In the normal mode, activating the backlight prior to the audible tone causes the backlight to turn on for 5 seconds after the temperature measurement is complete.

## TIMER

The timer may be used to determine a patient's pulse, respiration, or IV drip rate. Operation of the timer is similar to a stop watch and provides a convenient 15 and 30 second audible and visible time indicator. (See figure 11.)

The timer may be used during or independently of a temperature measurement. It may be restarted at any time by pressing the "timer" switch.

## °F/°C CONVERSION

The °F/°C switch may be changed at any time to allow reading in Fahrenheit or Celsius scales.

## ERROR INDICATORS

- **Probe Position**—The probe position error is an indicator that appears whenever there is a rapid drop in temperature. This can be the result of excessive probe movement or poor tissue contact. No audible tone will sound for this error indication, however, a visual indicator will activate.

The temperature display will not update until this condition is corrected.

When any of the following operational problems occur, a tone will sound twice (every 10 seconds) and the appropriate error indicator will flash on and off. No temperature will be displayed while in the error mode and the unit will shut off in 5 minutes.



- **Broken Probe**—This error signal indicates that the probe will not function correctly and should be replaced.
- **Low Batteries**—The low battery indication alerts the user to change batteries.  
A low battery error will display when:
  - a. A low battery condition exists at any time during monitor mode,
  - b. A low battery condition exists prior to starting a predict mode temperature or activating the pulse timer.
- **Malfunction**—The Malfunction error indicator will activate after the self check if there is an internal malfunction in the thermometer (does not include probe and battery malfunctions).

## SELF TESTS

1. **Initial Power Up Display**—A special display test is performed each time a new set of batteries is installed. Upon inserting batteries, all display segments are sequentially activated. The complete test requires 25 seconds and happens only when batteries are changed.
2. **Calibration Check**—Each time the thermometer is turned on, an internal check for proper calibration is made at 100.5°F during the display test. A malfunction error will be indicated if the thermometer calibration is in error by more than 0.2°F.
3. **Microprocessor Self Check**—Each time the thermometer is turned on, an internal check for proper microprocessor operation, including a test of the entire program, is made during the display test. A malfunction error will be indicated if any faults are detected.

## CLEANING AND STERILIZATION

The Model 600 unit and probes should periodically be cleaned by wiping them with an alcohol soaked cloth or wipe, warm water or non-staining disinfectant. (**Caution:** use care to dilute disinfectant to recommended proportions.)

Do not autoclave or immerse the Model 600 unit.

When required, the unit may be exposed to Ethylene Oxide (ETO) sterilization. This is to be done at no more than 100°F and 85% humidity. **This procedure is to be used only when absolutely necessary. It is imperative that the batteries must be removed from the unit before ETO sterilization.**

It is the user's responsibility to assure proper decontamination through the use of appropriate biological indicators.

## BATTERY REPLACEMENT

Remove the battery compartment access screw. (figure 12)

Slide the battery access cover away to expose the batteries.

Carefully remove all three batteries, prying gently with a screwdriver if necessary.

Install 3 new AA batteries paying special attention to the + and - marks in the battery compartment.

Slide the cover back into place and install the access screw.

As soon as the batteries are installed, a special display test is activated which sequentially lights then extinguishes each display segment. The entire test lasts about 25 seconds. **NOTE:** if the horn is activated by installing new batteries allow the display test to finish, then activate the pulse timer to reset the horn.

Figure 1

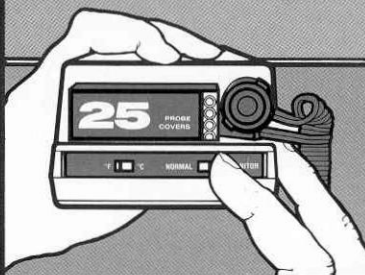


Figure 7

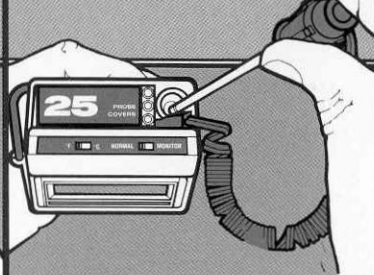


Figure 2



Figure 8

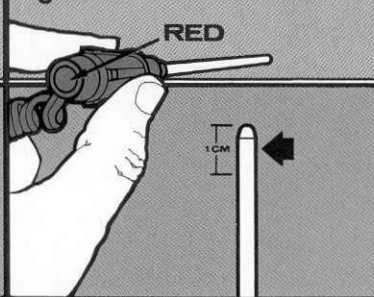


Figure 3

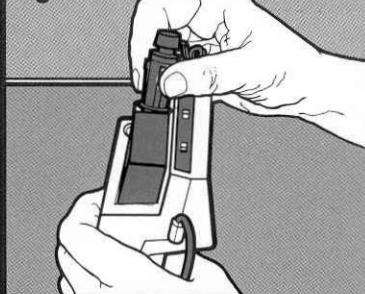


Figure 9



Figure 4

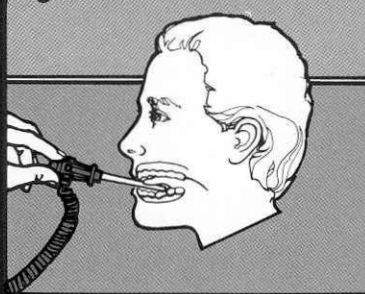


Fig. 10

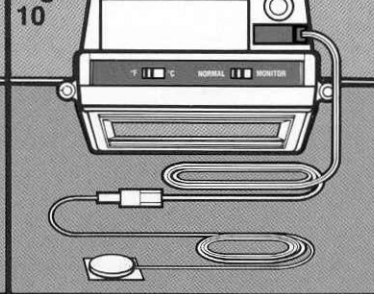


Figure 5

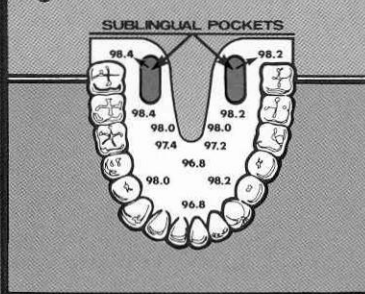


Figure 11



Figure 6

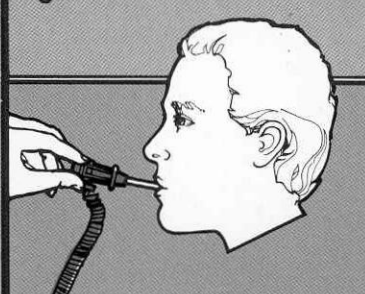
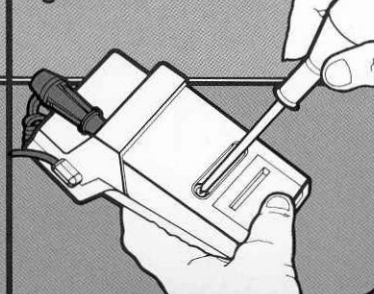


Figure 12



### **LIMITED WARRANTY**

Instrumentation purchased new from Diatek is warranted to be free from defects in material and workmanship under normal use and service for a period of one year from the date of first shipment from Diatek. This warranty shall be fulfilled by Diatek or its authorized representative repairing or replacing at Diatek's discretion, any such defect, free of charge for parts and labor.

Diatek should be notified via telephone of any defective product and the item should be immediately returned, securely packaged and postage pre-paid to Diatek. Loss or damage in shipment shall be at purchasers' risk.

Diatek will not be responsible for loss associated with the use of any Diatek product that (1) has had the serial number defaced, (2) has been repaired by anyone other than an authorized Diatek Service Representative, (3) has been altered, or (4) has been used in any manner other than in accordance with instructions.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR PARTICULAR PURPOSE, OR OTHER WARRANTY OF QUALITY, WHETHER EXPRESS OR IMPLIED, DIATEK WILL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.



# **DIA TEK<sup>®</sup>**

## **INCORPORATED**

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